



Photo by: Ernie Schenk

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www.cwsd.org

Linda Conlin, Golden Pinecone Sustainability Award Winning Educator! By: Brenda Hunt, CWSD

CWSD extends our heartfelt congratulations to Linda Conlin, former Director of River Wranglers, on being this year's Golden Pinecone Sustainability Award Winner in the Educator category! The [Golden Pinecone Sustainability Awards 2017](#), hosted by [GREENevada](#), will celebrate awardees on Tuesday, November 7th, at the National Automobile Museum in Reno. The awards recognize individuals and organizations for their efforts to make our community environmentally healthy and safe, and to promote sustainable living practices.

We highlighted Linda's retirement and her legacy as an amazing youth educator in the [Summer Edition of Watershed Connections](#). Linda Conlin stepped down as the Director and Lead Educator of River Wranglers in July after 23 years of dedicated service. Working largely with K-12 students in the Carson River Watershed, Linda championed hands-on education programs that reached over 2,000 students annually.



Linda Conlin at Floodplain Management Forum
Photo by Brenda Hunt

Her model of teaching high school students to mentor elementary students—who then become high school mentors to a new generation of environmental stewards-- is Linda's legacy and a testament to her sustained commitment and leadership. In an email introducing the new River Wranglers Director Linda stated, "I will continue to be involved in our watershed as a RW board member. As you know about 65% of the human body is made of water and I think most of mine is Carson River water!" Having worked as a UNCE 4-H educator for 23 years prior to spearheading River Wranglers, Linda's 46 years of passion, unwavering dedication, and tireless leadership is why she is the ideal Golden Pinecone Sustainability Award winning educator! Congratulations Linda, well done!!



Headwaters Restoration a Success in Alpine County

By Gavin Feiger, AWG Watershed Program Manager

On Saturday, September 9th, 55 volunteers worked on eight watershed restoration projects throughout the Carson River watershed for the Alpine Watershed Group's (AWG) 18th Annual Markleeville Creek Day. Representatives from various local organizations served as team leaders and project coordinators, including Alpine County, Alpine Garden Club, Alpine Trails Association, American Rivers, California Conservation Corps, California State Parks, Friends of Hope Valley, Sierra Nevada AmeriCorps Partnership, and community members were all present for this collaborative work day.



Photos Courtesy AWG

The group accomplished the following in the Carson River Watershed:

- ◆ 50 feet of streambank stabilized, one acre of trail revegetated, and a footbridge built at Turtle Rock Park near Markleeville
- ◆ 475 feet of streambank stabilized and 375 willow stakes planted in Hope Valley
- ◆ 400 additional willow stakes procured for future restoration and education
- ◆ 150 pounds of native seed spread and 200 pounds of invasive weeds removed from Grover Hot Springs Meadow
- ◆ 50 native trees protected from beaver
- ◆ 24 storm drains stenciled, 6 picnic tables stained, and trail maintenance in downtown Markleeville
- ◆ 27 pounds of trash removed from local rivers and stream

The event was a big success and it was great to see the community come together to help out and celebrate our local streams and waterways. Afterwards, volunteers enjoyed tasty treats provided by Raley's, Starbucks, Trader Joes and Nature's Bakery.



Restoration work continued in Bear Valley the following weekend. AWG partnered with Lake Alpine Water Company and 13 volunteers on the western slope of Alpine County to improve trout spawning habitat by stabilizing streambanks and building a footbridge at Bear Lake.

The Alpine Watershed Group would like to thank our volunteers for coming to Markleeville Creek Day. We would also like to thank our sponsors for helping to make this restoration event a success: Trout Unlimited – Sagebrush Chapter, Bently

Enterprises, Broadbent and Associates Inc., and Douglas Disposal Inc. Contact Gavin Feiger, awg.gavin@gmail.com, visit [AWG's Facebook page](#) for more photos, and/or [our website](#) to sign up for the AWG newsletter and discover opportunities to get engaged with Alpine County's watersheds!

Drainage Master Planning in Douglas County, Nevada

By: Courtney Walker, Douglas County

Douglas County, in partnership with the Carson Water Subconservancy District, recently received a \$285,000 grant from FEMA to create the Johnson Lane Area Drainage Master Plan (Johnson Lane ADMP). The primary purpose of the Johnson Lane ADMP is to identify the flooding hazards based on existing conditions and provide a prioritized list of projects that will allow the drainage facilities to function to current Douglas County Standards. The Johnson Lane area is located in the eastern part of the County just below the Pine Nut Mountains. The neighborhood is located on an alluvial fan, and is subject to flash flooding due to summer thunderstorm activity.

The development of the Johnson Lane area goes back to the 1950s. The area primarily developed due to serial parcel maps which only required development to provide infrastructure similar to adjacent areas. Large portions of Johnson Lane area developed without much thought given to stormwater conveyance. The historic drainage patterns have been altered due to the network of roads, homes, landscape berms, and undersized drainage infrastructure. Offsite flows and existing drainage networks have never been comprehensively studied or engineered to any standard.

As the area continues to develop, open space for drainage has become scarce. Major flash floods occurred in 1991 and 1992. In the summer of 2014, flooding occurred when 1.23 inches of precipitation fell in two hours. Just weeks later, 1.5 inches of precipitation fell in 20 minutes. The existing drainage infrastructure was quickly overwhelmed. The Nevada Division of Emergency Management estimated that 146 parcels were damaged by flood waters. Estimated damage to public infrastructure was \$927,205 and \$1,556,983 of damage occurred to private properties. In 2015, flash flooding again affected the Johnson Lane area causing damage to approximately 162 parcels and an estimated \$2.2 million in damages to public infrastructure (2015 storm damage estimates for private property were not provided by the Division of Emergency Management).

Since the floods of 2014 and 2015, residents have erected property-wide berms to protect their parcels from flooding. These berms have completely altered the natural drainage and were erected without considering the drainage needs of downstream properties. The Johnson Lane ADMP aims to return flows to historic locations and provide regional flood protection.



Photos Courtesy Douglas County





Carson City Weed Coalition Update

By Dan Anderson and Lyndsey Boyer, Carson City

With the floods of January and February we knew it was going to be a big year for noxious weeds, but we didn't expect just how much growth we would receive! Throughout Carson City the extra moisture



Before Musk Thistle Removal



After Musk Thistle Removal

Photos Courtesy Carson City

brought massive germination and growth of noxious and invasive weeds. We saw species such as poison hemlock, expand their range. The seasonal flooding also posed some significant treatment challenges as many of the areas treated annually around Carson City were inundated late into the summer. Even those areas that weren't underwater had severely damaged roads, making access and treatment to those sites nearly impossible.

Despite facing these challenges, the Coalition was able to get out and complete some on-the-ground treatments. Our main focus this year was on perennial pepperweed, hoary cress, musk thistle, Canada thistle, and poison hemlock. As always, we're constantly on the lookout for new infestations of yellow star-thistle and Scotch thistle, and looking to catch medusahead before it starts. With all that added moisture, we are seeing a second round of germination of perennial pepperweed and hoary cress – so the Coalition will be treating well into the fall.

Other activities this season focused on mapping new infestations, participating in a number of educational events, and applying for grant funding. In August, members of the Coalition attended a noxious weed workshop in Pilot Hill, CA. The workshop focused on yellow star-thistle and medusahead treatment efforts in

California and the progress being made through targeted grazing. Sheep are used to graze yellow star-thistle and have shown some incredible results. Amazingly, sheep can be conditioned to eat yellow star-thistle - even after it has gone to flower! The workshop results are a perfect example of employing integrated pest management strategies to treat a significant noxious weed issue on the landscape.

Please help in our efforts to tackle noxious and invasive weeds within our city. Together with early detection and rapid response, we can keep Carson City free of weeds. Questions or concerns? Please contact the Carson City Weed Coalition or refer to the links below for information on plant identification and noxious weed locations.

Phone: Dan Anderson, 775-283-7035

Email: dhanderson@carson.org

Facebook: <https://www.facebook.com/CCWeeds>

Plant ID: <http://www.eddmaps.org/west/Species/>

Maps: <http://www.eddmaps.org/west/distribution/>



CWSD Welcomes Our First AmeriCorps Member

CWSD welcomes Louise Thompson, the Carson Water Subconservancy District's new AmeriCorps (Corporation for National and Community Service) member, starting October 10, 2017. As our Watershed Program Technician, Louise will be specializing in outreach and education,



while assisting CWSD with a myriad of planning and coordination efforts. Louise brings a working background in education, ecological restoration, and, most recently, fisheries. She earned her B.A. in Psychology from St. Cloud State University in Minnesota and post AmeriCorps, hopes to continue her education with a M.S. in Natural Resources at the University of Minnesota.



Individuals that commit their time and skills to get things done for America

Louise has a strong interest in water resources and is excited to begin learning as much as possible about the Carson River Watershed. In addition to learning all what she can, Louise is thrilled to be combining her skills and ready to make positive contributions to the CWSD and watershed programs. Louise enjoys outdoor recreation of any kind, farmers markets, community events, and cooking.

CWSD is partnering with the [Truckee Meadows Parks Foundation](#) to be a host site for our AmeriCorps member. We are excited to have Louise join our staff! Welcome, Louise!



April 29 – May 2, 2018 | Lake Tahoe, California

www.rivernetwork.org



River Rally, hosted annually by River Network, is a national conference for river and water champions. River Rally brings together hundreds of people from across the United States and the world who care about rivers and water issues.

Community Source Water Protection Education Summary

By: Kristin Roaldson , Resource Concepts, Inc.



Photos Courtesy RCI

Since 2012, Resource Concepts, Inc. (RCI) has assisted with the Integrated Source Water Protection Program through the Bureau of Safe Drinking Water at the Nevada Division of Environmental Protection (NDEP). Through a collaborative planning process, RCI has helped the counties in the Carson River watershed to develop and implement Source Water Protection Plans. The plans have an educational component to inform citizens about protecting source water for themselves and for future generations. Our team has participated in many educational events throughout the watershed with the goal of spreading the message of source water protection to students, parents, teachers, and the general public.

Over 2,200 students throughout the watershed have been educated in 2017 alone. We have taught lessons to middle schoolers in Carson City and Douglas County and provided booths at STEM/STEAM nights. We have enjoyed being part of the Trout in the Classroom and Ag in the Classroom programs and have participated in the Lyon County Faire and Carson Valley Days. We rely on watershed and groundwater models to convey source water protection concepts to students, asking the following questions:

- ◆ When you turn on the faucet, where does the water come from?

In the Carson River watershed, much of the water is sourced from groundwater so we explain aquifers, wells, and pumps.

- ◆ What is the difference between a storm drain and a sewer?

The storm drain is a pipe that takes runoff from the street directly to the river without treatment and a sewer is a pipe that takes water from toilets, showers and sinks to a wastewater treatment plant to be treated.

- ◆ What is a watershed?

A watershed is an area of land that drains all the streams and precipitation to a common low point which in the Carson River is the Carson Sink. The word watershed is sometimes used interchangeably with drainage basin or catchment. Ridges and hills that separate two watersheds are called the drainage divide. ([USGS website](https://www.usgs.gov/learn/what-is-a-watershed))

- ◆ How can water become polluted or contaminated?

Pollution or contamination can come from agriculture, industry, residential, urban, and natural sources. We can be good stewards of the land and water by changing our behavior and being a good example to others.



The Source Water Protection Program is managed by Kim Borgzinner with the Bureau of Safe Drinking Water and the RCI team includes Project Principal Marvin Tebeau, Project Manager/Engineer Jill Sutherland, Fluvial Geomorphologist Lynn Zonge, Environmental Engineer Kristin Roaldson, and Environmental Technician Jake Azevedo. RCI has been grateful for the opportunity to engage with residents of the Carson River Watershed through this program. Please contact Kristin Roaldson, (775) 883-1600, kristin@rci-nv.com for additional information or educational opportunities.

Continued from Page 3

The primary goals of the Johnson Lane ADMP are:

- ◆ *Identify and characterize historic drainage patterns.*
- ◆ *Identify and characterize the existing and potential flooding hazards based on current conditions.*
- ◆ *Assess the risks of the flood hazards and categorize the flood hazards for mitigation considerations.*
- ◆ *Prioritize and provide estimated costs for infrastructure improvements to provide flood protection to the properties within the ADMP geographic boundaries.*



Photos Courtesy Douglas County

The results of the ADMP will be used to prioritize additional actions to help existing property owners and development. The results will also be used to guide future development and help plan drainage infrastructure and flood mitigation measures appropriate for the physical and natural environment.

Douglas County is hopeful the Johnson Lane ADMP can serve as a model for additional drainage master plans in the area. JE Fuller is the consulting firm hired to complete the work. They have experience putting together several plans like this in Arizona. For more information, please contact Erik Nilssen,

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Alpine Aspen Festival
Alpine Watershed Group,
& Friends of Hope Valley

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Alpine County Chamber of Commerce and US Forest Service.

Fall Colors Hike

Join us on October 21st at 2pm!

Come enjoy breathtaking
views of the changing season
and learn about local ecology
on an easy three-mile hike at
Carson River Park at
5013 Carson River Road

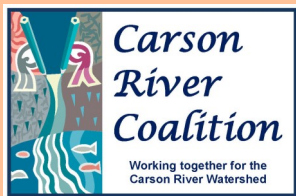
Hosted by the Carson City Parks, Recreation, & Open Space Department
Any Questions, call (775) 283-7711

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Upcoming Events

October 7– 8, 2017,
Alpine Aspen Festival
Saturday 9:00AM-8:00PM
Sunday 10:00AM-4:00PM
Hope Valley, CA
Visit: www.AspenFest.org

October Events at Fort Churchill State Park! Join Park Staff for All Hallows Eve—Oct. 21, 2017, and Make a Difference Day—Oct. 28, 2017. For more information
Visit: parks.nv.gov

October and November Muscle Powered Events in Carson City, NV. For more information
Visit: www.musclepowered.org

October 21, 2017, 2:00 PM
3-Mile Fall Colors Hike at Carson River Park, Hosted by Carson City Parks, Recreation, and Open Space Department. For more information call 775.283.7711.



October 27, 2017 (still tentative)
one hour post sunset
Star Party at River Fork Ranch
For more information
Visit: www.nature.org

November 12-17, 2017
Flood Awareness Week Events!
Nov. 12: Flood Awareness Week Kick-off 10:00Am—2:00PM Meadowood Mall, Reno
November 14: Douglas County Flood Awareness Event
For more information
Visit: www.nevadafloods.org

February 26-March 1, 2018
Nevada Water Resources Annual Conference, Las Vegas, NV
For more information
Visit: www.nvwra.gov

April 29 – May 2, 2018,
River Network's 4-Day River Rally is in our backyard at Olympic Valley this year! Early Registration Opens Dec 1, 2017
[Register Here](#)

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